

Amendments to the Drawings:

The attached new sheets of drawing includes Figs. 1, 1A, 2, 2A, 3 and 3A. These sheets replaces the original sheets 1/5, 2/5, and 3/5.

Attachment: Replacement sheets 1/5, 2/5, and 3/5.

REMARKS

Three new sheets of drawing are submitted herewith. Sheet 1 of 5 renders former Figure 1 as Figures 1 and 1A, with the actuating frame in the open and closed positions, respectively. Sheet 2 of 5 renders former Figure 2 as Figures 2 and 2A, with the crosshead in the closed and open positions, respectively. Sheet 3 of 5 labels Figure 3A separately from Figure 3, for consistency with the preliminary amendment.

The specification has been amended to refer to the new Figures 1, 1A, 2, and 2A separately. Additionally, some components in the lower half of each figure are referenced with primed numerals to distinguish them from the components in the upper half of each figure. The specification has also been amended to provide proper antecedence for claim 32.

Claim 17 has been amended to incorporate the limitation of claim 18, and to recite the relationship between the linear motor and the force transmission element. While the relationship is recited in terms of desired result rather in purely structural terms, there is nothing inherently wrong with defining some part of an invention by what it does rather than what it is. In re Swinehart, 169 USPQ 226 (CCPA 1971). See MPEP 2173.05(g).

Claim 25 is considered indefinite as to the function of the force transmission element when the inductor combs are fixed in the movable mold clamping plate. This rejection is addressed by the recitation of at least one double comb motor in claim 17. That is, each motor has two inductor combs, and these two combs are never both fixed to the movable mold clamping plate. At least one comb of each motor is always fixed to the force transmission element, so that it is still accurate to say that the motor as a whole drives the force transmission element. It is therefore believed that claim 25 is wholly definite. Newly submitted claim 37, which depends from claim 25, should make this clear.

Claims 17 and 21-25 stand rejected as anticipated by JP 63-1516; claims 17 and 21-24 stand rejected as anticipated by JP-154823. These rejections are rendered moot by the amendment of claim 17 to incorporate the limitation of claim 18.


Claims 18-19 stand rejected as obvious over JP 63-1516 in view of Farrell U.S. 4,088,432. To the extent that this rejection would be applied to claim 17 as presently amended, such rejection is traversed for the reasons following.

JP 63-1516 discloses a closing device for an injection molding machine including a linear motor 43 constituted by a rod 41 surrounded by a cylindrical stator 42. This is a solenoid motor, of the type discussed and distinguished in the background section of the present application, and cannot achieve the force generated by a double-comb motor.

Farrell discloses a mold lock-up mechanism employing a pair of hydraulic drives. Like JP 63-1516, this reference neither discloses nor suggests use of a comb-type linear motor, and therefore adds nothing toward rendering claim 17 obvious.

The claims as amended being definite and patentable over the art of record, withdrawal of the rejections and early allowance are solicited. If any objections remain, a call to the undersigned is requested.

Respectfully submitted,
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